

as much as an inch above normal. It was usually greater than normal in the Dakotas and thence westward to the north Pacific coast, except that northeastern Oregon and portions of adjacent States had less than normal. Much of the middle Plateau region, Colorado, northern New Mexico, and northwestern Texas had more than normal, also most of the west and middle Gulf coast districts, central and northeastern Tennessee and adjoining areas, much of Minnesota and western and northern Wisconsin, and some northern counties of New York and Vermont.

Monthly totals as great as 10 inches were attained in only a very few localities, all in California or Washington.

Arkansas was the State with greatest average deficiency, slightly over 2 inches, the average fall being almost 3 inches. Most of the middle and lower Mississippi Valley fell considerably short of normal, but not in the vicinity of the Gulf coast. Large portions of the central and southern Plains had considerable deficiencies, also central and southern California and most districts to eastward almost to the Rio Grande. Along the Mexican border there was usually no rain or almost none from southeastern California to the one hundredth meridian in Texas.

East of the Mississippi River there was a notable shortage in most of Mississippi, Alabama, western and southern Florida, southern Georgia, and eastern South Carolina, likewise in the upper Ohio Valley, southern New England, and the interior of the Middle Atlantic States, and near the middle and southern portions of Lake Michigan.

#### SNOWFALL

East of the one hundredth meridian the snowfall was not remarkable for April, save in a very few localities; but at Canton, N. Y., the amount was the greatest in a record extending over 35 years. Usually there was a little more than the average April snowfall at stations near the Canadian boundary from western Maine to Minnesota. As far north as Albany, N. Y., and LaCrosse, Wis., many stations escaped measurable snowfall.

In the States of the far West snowfall usually exceeded the normal, except near the Canadian border and in large parts of the Pacific States. The prospects for liberal flow next summer in streams fed by melting snow are judged to be good in nearly all the far West.

#### SUNSHINE AND RELATIVE HUMIDITY

Rather abundant sunshine prevailed generally during the month in almost all southern areas, and locally in the central part of the upper Lake region and central New England States. On the other hand the sunshine was deficient in the northern and central Great Plains and westward to the Pacific. Elsewhere it was generally near or slightly above the normal.

The relative humidity was above the normal in the far Northeast, the northern Great Plains, and much of the area westward therefrom to the Pacific. Elsewhere it was generally below the seasonal average, except that along the Gulf coast it was practically normal. The departures from the normal were in most cases small.

#### SEVERE LOCAL STORMS, APRIL, 1932

[The table herewith contains such data as have been received concerning severe local storms that occurred during the month. A revised list of tornadoes will appear in the Annual Report of the Chief of Bureau]

Place	Date	Time	Width of path (yards) <sup>1</sup>	Loss of life	Value of property destroyed	Character of storm	Remarks	Authority
Attica and Varysburg, N. Y.	2	10 p. m.				Winds	Barn destroyed; livestock killed; orchards uprooted; telephone lines blown down; considerable minor damage to buildings.	Official, U. S. Weather Bureau.
Canton, N. Y.	2-3					Sleet, glaze and wind.	Overhead wires and trees considerably damaged; electric and power lines affected.	Do.
Lepanto, Ark.	7				\$300	Severe wind.	One house demolished; 7 persons injured.	Do.
Shawnee and Wabaunsee Counties, Kans.	16				8,000	Heavy hail	Character of damage not reported.	Do.
Denver (north), Colo.	20		50			Small tornado	Warehouse, windows and roofs damaged; path one city block long.	Do.
Arriba, Colo.	20-21					Wind	Much of spring grain blown out; soil badly drifted in places.	Do.
Pulaski and Massac Counties, Ill.	21	6 a. m.	1.5 mi.		4,300	Hail	Roofs, hotbeds, and gardens damaged.	Do.
Grafton, Calif.	21	4 p. m.	1,760			do.	15 per cent of cherries and prunes ruined; apples knocked off.	Do.
Glenrock to Midwest, Wyo.	23				7,000	Glaze	Chief damage to telephone wires.	Do.
Memphis, Tenn., and vicinity.	24	9-11 p. m.				Wind	Trees uprooted; buildings damaged.	Do.
De Kalb, County and vicinity, Ala.	24				1,600	Hail and wind	Some buildings damaged.	Do.
Villa Ridge, Ill.	24					Hail	Truck gardens and glass damaged.	Do.
Birmingham, Ala.	24-25					Hail and wind	Trees, gardens and auto tops riddled; composition roofs completely ruined.	Do.
Decker, Ind.	25				14,000	Hail	Small animals killed; buildings, autos, gardens, and trees damaged.	Do.
Montgomery, Sumner, Monroe and Maury Counties, Tenn.	25	1:30 a. m.			42,000	Winds and possibly tornado.	Buildings damaged; trees uprooted; 3 persons injured; tornadic characteristics 4 miles north of Nashville.	Do.
Shivers, Miss.	25	6 a. m.				Tornado	No details reported.	Do.
Oseola (near), Okla., to Ashport, Tenn.	25	9:30 a. m.	16-33		35,000	do.	5 houses demolished, several damaged; 2 cotton gins wrecked; 5 persons injured.	Do.
Locke to Rosemark, Tenn.	25	9:30-10:10 a. m.	100-300	6	100,000	do.	Livestock killed; practically all buildings in path wrecked; 28 persons injured; path 16 miles long.	Do.
Champaign, Wabash and Vermilion Counties, Ill.	25	1 p. m.	880			Hail	Heavy damage to truck, fruit, hotbeds, and greenhouses; path 2 miles long.	Do.
Mechanicsburg, Ind.	25	P. m.			300	Tornadic wind	Character of damage not reported.	Do.
Tobyhanna, Pa.	26	do.				Tornado	Several small buildings wrecked, others damaged.	Do.
Nashville, Ga. (7 miles southeast).	26			3	2,000	do.	3 small buildings demolished.	Do.
San Diego County, Calif.	26					Hail	Fruit damaged.	Do.
Cheyenne to Sherman Hill, Wyo.	27					Glaze	Telephone and telegraph wires broken.	Do.
Magnolia, Miss.	29	10:20 a. m.				Tornado	No details reported.	Do.
Boonesville, Miss.	29	4:30 p. m.		2		do.	do.	Do.
Pauls Valley, Okla.	30	8 a. m.	2 mi.		1,500	Hail	Chief damage to crops.	Do.
Americus, Ga. (15 miles northwest).	30	3 p. m.				Possibly tornado.	Several farm buildings wrecked; valuable cattle killed.	Do.

<sup>1</sup> Mi. signifies miles instead of yards.